

1. (Cancelled)
2. (Currently Amended) A display apparatus for optimizing a displayed image for use in an electronic device, comprising:
  - a display for presenting a visual image, the display comprising a pixel array;
  - a processor for determining an intensity of a backlight for illuminating the display; and
  - a controller coupled to the display and the processor, wherein the controller optimizes the visual image corresponding to an intensity of the backlight by adjusting only a brightness of pixels in a pixel array responsive to changes in the intensity of a backlight, the brightness of a pixel adjusted by adjusting a level of at least one of a red, a green and or a blue setting for a pixel of the pixel array.
3. (Original) The display apparatus of claim 2 wherein a hue of the pixel of the pixel array is retained when the visual image is optimized.
4. (Original) The display apparatus of claim 3 wherein the saturation of the pixel of the pixel array is retained when the visual image is optimized.
5. (Currently Amended) A display apparatus for optimizing a displayed image for use in an electronic device, comprising:
  - a display for presenting a visual image, the display comprising a pixel array;
  - a processor for determining an intensity of a backlight for illuminating the display; and
  - a controller coupled to the display and the processor, wherein the controller optimizes the visual image corresponding to an intensity of the backlight by adjusting a level of a red, a green or a blue setting for a pixel of the pixel array. The display apparatus of claim 2 wherein the level of the one of the red, the green and or the blue settings is adjusted inversely proportionally to the intensity of the backlight.
6. (Currently Amended) The display apparatus of claim ~~2~~5 wherein the level of the ~~one of the red, green and or blue~~ settings is adjusted inversely proportionally to the intensity of the backlight until ~~a~~ one of the settings would exceed a limit value,

wherein the one of the settings is set to a maximum value and an adjustment proportional to a change of the one of the settings is used for a remaining setting.

7. (Currently Amended) The display apparatus of claim ~~2~~5 wherein the level of the ~~one of the red, green and/or~~ blue settings is adjusted inversely proportionally to the intensity of the backlight until a one of the settings would exceed a limit value, wherein the intensity of the backlight is adjusted until the one of the settings is approximately at the limit value.

8. (Original) The display apparatus of claim 2 wherein the pixel of the pixel array is adjusted in accordance with the intensity of the backlight at the pixel.

9. (Previously Amended) The display apparatus of claim 2 wherein the electronic device is one of a wireless communication device and personal digital assistant.

10. (Previously Amended) The display apparatus of claim 2 wherein the controller optimizes the visual image based on the intensity of the backlight according to one of a fixed value look up and a real-time calculation.

11. (Previously Amended) The display apparatus of claim 2 wherein the controller optimizes the visual image corresponding to the intensity of the backlight in real time with respect to an incoming image.

12. (Previously Amended) The display apparatus of claim 2 wherein the controller optimizes the visual image corresponding to the intensity of the backlight in a buffer memory.

13. (Previously Amended) A method for optimizing an image in a display of an electronic device responsive to a change in an intensity of a backlight comprising:  
determining a factor for adjusting the image according to the intensity of the backlight including determining a constant value for scaling a brightness of a pixel in the display; and

adjusting only the brightness of pixels in a pixel array, the image using the factor, responsive to changes in the backlight intensity.

14. (Cancelled)

15. (Original) The method of claim 13 wherein the determining a factor further comprises:

determining a value for scaling a brightness of a pixel in the display to maintain a hue of the pixel.

16. (Original) The display apparatus of claim 13 wherein the determining a factor further comprises:

determining a constant value for scaling a brightness of a pixel to maintain a saturation of the pixel.

17. (Cancelled)

18. (Currently Amended) A method for optimizing an image in a display of an electronic device responsive to a change in an intensity of a backlight comprising:  
determining a factor for adjusting the image according to the intensity of the backlight including determining a constant value for scaling a brightness of a pixel in the display;

adjusting the image using the factor; and ~~The method of claim 13 wherein the determining the factor further comprises:~~

determining the magnitude of a one of a red, a green and a blue setting for a pixel in the display inversely proportionally to the change in the intensity of the backlight unless the magnitude of the one exceeds a limit wherein the magnitude of the one is set to a maximum and a factor proportional to the one is determined for a remaining setting.

19. (Original) The method of claim 13 wherein the determining the factor further comprises one of:

determining the factor according to a table look up; and

determining the factor according to a calculation using a value corresponding to the intensity of the backlight.

20. (Original) The method of claim 13 wherein the optimizing the image further comprises:

adjusting the image in a portion of the display according to the intensity of the backlight in the portion.

21. (Currently Amended) A display controller for providing an image optimized to a backlight intensity comprising:

a first input for receiving a first data to display as the image;

a second input corresponding to a backlight intensity of a display having a pixel;

an output for driving the pixel of the display; and

a processor for adjusting a brightness of the pixel responsive to one of the first and second input, the processor adjusting a value for ~~at least one of the red, the green and or the blue settings~~ setting for the pixel to adjust the brightness of the pixel in inverse proportion to the backlight intensity.

22. (Original) The display controller of claim 21 wherein the second input is one of an indication of backlight intensity and a second data for use in adjusting the backlight intensity.

23. (Cancelled)

24. (Currently Amended) The display controller of claim 21 wherein the processor adjusts the value for ~~the one of the red, the green and or the blue settings~~ setting for the pixel to maintain a hue of the pixel.

25. (Currently Amended) The display controller of claim 21 wherein the processor adjusts a value for ~~one of the red, the green, and or the blue settings~~ setting for the pixel to maintain a saturation of the pixel.

26. (Currently Amended) A display controller for providing an image optimized to a backlight intensity comprising:

a first input for receiving a first data to display as the image;

a second input corresponding to a backlight intensity of a display having a pixel;

an output for driving the pixel of the display; and

a processor for adjusting a brightness of the pixel responsive to one of the first and second input, the processor adjusting a value for the red, the green or the blue setting for the pixel to adjust the brightness of the pixel in inverse proportion to the backlight intensity. The display controller of claim 21 wherein the processor adjusts the value for the one of the red, the green and or the blue settings setting for the pixel inversely proportionally to the backlight intensity until a one of the settings would exceed a limit value, wherein the one of the settings is set to a maximum value and an other setting is increased by the percentage increase of the one.

27. (Original) The display controller of claim 21 wherein a portion of the display is adjusted corresponding to the intensity of the backlight intensity in that portion of the display.

28. (Original) The display controller of claim 21 wherein the processor optimizes the visual image based on the backlight intensity according to one of a fixed value look up and a real-time calculation.

29. (Cancelled)

30. (Currently Amended) A display apparatus for optimizing a displayed image for use in an electronic device, comprising:

a display for presenting a visual image, the display comprising a pixel array;

a controller coupled to the display for rendering and storing visual images;

a processor coupled to the controller wherein the processor controls an intensity of a backlight, the backlight for illuminating the display, the processor further retrieves images from the controller, creates an optimized rendered visual image corresponding to the intensity of the backlight and returns the optimized

rendered visual image to the controller for display, wherein the visual image is optimized by adjusting only the brightness of pixels of the pixel array, the brightness of a pixel adjusted by adjusting a level of at least one of a red, a green and or a blue setting for a pixel of the pixel array.

31. (Original) The display apparatus of claim 30 wherein one of a hue and a saturation of the pixel of the pixel array is retained when the visual image is optimized.

32. (Currently Amended) A display apparatus for optimizing a displayed image for use in an electronic device, comprising:

a display for presenting a visual image, the display comprising a pixel array;  
a controller coupled to the display for rendering and storing visual images; and  
a processor coupled to the controller wherein the processor controls an intensity of a backlight, the backlight for illuminating the display, the processor further retrieves images from the controller, creates an optimized rendered visual image corresponding to the intensity of the backlight and returns the optimized rendered visual image to the controller for display, wherein the visual image is optimized by adjusting a level of a red, a green or a blue setting for a pixel of the pixel array. ~~The display apparatus of claim 30 wherein the level of the one of the red, the green or and the blue settings-setting is adjusted inversely proportionally to the intensity of the backlight.~~

33. (Currently Amended) The display apparatus of claim ~~30~~ 32 wherein the level of ~~the one of the red, green and or blue settings-setting~~ is adjusted inversely proportionally to the intensity of the backlight until a one of the settings would exceed a limit value, wherein the one of the settings is set to a maximum value and an other setting is increased by an amount proportional to the increase of the one.

34. (Currently Amended) The display apparatus of claim ~~30~~ 32 wherein the level of ~~the one of the red, green and or blue settings-setting~~ is adjusted inversely proportionally to the intensity of the backlight until a one of the settings would exceed a limit value, wherein the intensity of the backlight is adjusted until the one of the settings is approximately at the limit value.

35. (Original) The display apparatus of claim 30 wherein the pixel of the pixel array is adjusted in accordance with the intensity of the backlight at the pixel.

36. (Original) The display apparatus of claim 30 wherein the electronic device is one of a wireless communication device and personal digital assistant.

37. (Previously Amended) The display apparatus of claim 30 wherein the controller optimizes the visual image based on the intensity of the backlight according to one of a fixed value look up and a real-time calculation.

38. (Previously Amended) The display apparatus of claim 30 wherein the controller optimizes the visual image corresponding to the intensity of the backlight in real time with respect to an incoming image.